

REMARKS

Claims 29-34 are currently pending in this case. Claims 1-28 are cancelled without prejudice and without disclaimer of the subject matter. Claims 29-34 are newly added. No new matter was added. Support for the amendments may be found in at least paragraphs [0025], [0077], [0189], and [0224] of the specification.

Claim Rejections – 35 USC § 103

Claims 1-6, 8, 10-13, 15-25, and 28 were rejected as unpatentable under 35 USC §103(a) over International Publication No. WO 02/29427 by Nguyen ("Nguyen") in view of U.S. Patent Application Publication No. 2002/0002603 by Vange ("Vange"). Claim 7 was rejected as unpatentable under 35 USC §103(a) over Nguyen in view of Vange and further in view of U.S. Patent No. 7,454,516 to Wienert et al. ("Wienert"). Claims 9 and 14 were rejected as unpatentable under 35 USC §103(a) over Nguyen in view of Wienert. Claim 26 was rejected as unpatentable under 35 USC §103(a) over Nguyen in view of Vange and further in view of U.S. Patent No. 6,728,748 to Mangipudi et al. ("Mangipudi"). Claim 27 was rejected as unpatentable under 35 USC §103(a) over Nguyen in view of Vange and further in view of U.S. Patent Application Publication No. by Aoki et al. ("Aoki").

Claims 1-28 are cancelled rendering their rejections moot. Nguyen, Vange, Wienert, Mangipudi, and Aoki, either alone or in combination, fail to teach or suggest all of the features of new claims 29-34.

Claim 29

Nguyen, Vange, Wienert, Mangipudi, and Aoki, either alone or in combination, fail to teach or suggest the features of claim 29 of:

a function relocation unit configured to analyze, in response to an instruction of relocation, a current available node resource based on statuses of node resources in a network, to determine new node locations of node functions, and to relocate the node functions to the

new node locations through an addition of executable code at the new node locations, the node functions relocated in accordance with a relocation plan;

a path restructure unit configured to restructure a structure of paths in the network into an optimum condition in accordance with statuses of link resources in the network and in response to an instruction of restructuring, wherein the path restructure unit is configured to determine a restructuring plan for the structure of the paths based on an exchange of data on a draft relocation plan of the node functions and data on a draft restructuring plan of the structure of the paths, the exchange of data being between the function relocation unit and the path restructure unit; and

a control unit configured to determine whether transmission of the instruction of relocation to the function relocation unit is necessary and whether transmission of the instruction of restructuring to the path restructure unit is necessary based on the statuses of node resources and the statuses of link resources, wherein the control unit is further configured to selectively transmit the instruction of relocation and the instruction of restructuring.

(emphasis Applicant's). In sharp contrast, Nguyen describes a system that "simply reroutes traffic around points of congestion" (emphasis Applicant's) (Nguyen, p. 16, lines 5-6). Nguyen describes simply rerouting traffic around points of congestion by having a "big picture" of the network. (Nguyen, p. 16, lines 1-6.) In particular, Nguyen describes simply rerouting traffic around points of congestion by "utilizing a system that views all or substantially [all of] the network issues in real-time." (Nguyen, p. 16, lines 4-5.) Therefore, Nguyen fails to describe the features of claim 29 of "a control unit configured to determine whether transmission of the instruction of relocation to the function relocation unit is necessary and whether transmission of the instruction of restructuring to the path restructure unit is necessary" (emphasis Applicant's) (*contra*, Office Action, p. 5, lines 13-14).

Nguyen also fails to describe the features of claim 29 of "a function relocation unit configured ... to determine new node locations of node functions, and to relocate the node functions to the new node locations through an addition of executable code at the new node locations." Instead, Nguyen describes a method to

"automatically reroute traffic on different paths" (emphasis Applicant's) (Nguyen, p. 3, lines 5-6; and *see*, Office Action, p. 6, lines 8-9).

In addition, Nguyen fails to describe the features of claim 29 of "the path restructure unit is configured to determine a restructuring plan for the structure of the paths based on an exchange of data on a draft relocation plan of the node functions and data on a draft restructuring plan of the structure of the paths, the exchange of data being between the function relocation unit and the path restructure unit." Instead, Nguyen describes servers 110 that "evaluate ... which is the 'best route,' the prior route or Reroute 70." (Nguyen, p. 16, line 3 – p. 17, line 5.) Nguyen describes a method to automatically reroute traffic on the choice of different paths. (Nguyen, p. 3, lines 5-6.) Nguyen is silent on "a draft relocation plan of the node functions." It logically follows that Nguyen also fails to describe the features of "determine a restructuring plan for the structure of the paths based on an exchange of data on a draft relocation plan of the node functions and data on a draft restructuring plan of the structure of the paths."

Vange fails to bridge the gap because Vange also fails to describe these same features. Instead, Vange describes a method of serving web-based content. (Vange, Abstract.) In particular, Vange describes assigning and/or re-assigning intermediary servers 206 to data servers 210-212. (Vange, p. 4, ¶¶[0045] and [0047].) Vange also describes porting "functionality and behavior" to a computer in order to add "additional servers." (Vange, p. 4, ¶¶[0045]). However, porting functionality and behavior to additional servers fails to describe the features of "relocate the node functions to the new node locations." Vange is silent on "instruction of relocation" and "instruction of restructuring." Accordingly, Vange also fails to describe the features of claim 29 of "a control unit configured to determine whether transmission of the instruction of relocation to the function relocation unit is necessary and whether transmission of the instruction of restructuring to the path restructure unit is necessary." Vange is silent on "a draft relocation plan of the node functions and ... a draft restructuring plan of the structure of the paths." Furthermore, Vange

is silent on "the exchange of data being between the function relocation unit and the path restructure unit."

Even if the phrase "functionality and behavior ... is dynamically ported to ... computers", (Vange, p. 4, ¶[0045]), were construed to be equivalent to the features of "relocate the node functions to the new node locations through an addition of executable code at the new node locations" – which is not the case – Vange teaches away from, and changes the principal of operation of, Nguyen. Nguyen describes a system that "simply reroutes traffic around points of congestion" by having a "big picture" of the network. (Nguyen, p. 16, lines 1-6.) In sharp contrast, Vange describes a system in which requests issued from a client 205 for a service provided by an originating server 210-212 "must first be directed to a front-end [server] 201 that can provide the desired service" (emphasis Applicant's) (Vange, p. 5, ¶[0048]; *see*, FIG. 2B). This is true even in a case where "all transactions [are initiated] as if [the transactions] were contacting the originating server 210-212" (emphasis Applicant's) (Vange, p. 5, ¶[0048]). Therefore, if the front-end server 201 described in Vange were a point of congestion, Vange indicates that the traffic could not be routed around the front-end server 210 and sent directly to the originating server 210-212 because the traffic must first be directed to the front-end server 201. That is why a "public DNS performs a conventional DNS resolution [to direct] the browser [at the client 205,] to an originating server 210-212 and [the] originating server 210-212 performs a redirection of the browser" back to the front-end server 201 (emphasis Applicant's) (Vange, p. 5, ¶[0054]). Thus, Vange teaches away from simply rerouting traffic around points of congestion as described in Nguyen.

For at least the same foregoing reasons, Vange changes the principal operation of Nguyen. *See*, MPEP § 2143.01(VI). For the same foregoing reasons, Vange would also render Nguyen unsatisfactory for its intended purpose of simply rerouting traffic around points of congestion. *See*, MPEP § 2143.01(V).

Wienert and Aoki were cited for features different than the missing features of claim 29. Like Vange and Nguyen, Wienert and Aoki also fail to describe these missing features.

Mangipudi also fails to describe these missing features. Instead, Mangipudi describes an adaptive policy engine 704 that determines if the behavior of a class 600 of service in a cluster 708 of back end servers is within pre-configured commitments for the class of service. (Mangipudi, col. 13, lines 45-50.) The adaptive policy engine determines a need to rebalance a cluster 614 if a threshold is exceeded. (Mangipudi, col. 13, lines 50-53.) The adaptive policy engine tries to find the most available back end server in another cluster 706 and moves it into the cluster 708 when the threshold is exceeded. (Mangipudi, col. 13, lines 53-56.) This process is repeated until the committed SLAs are within an acceptable range for that class. (Mangipudi, col. 13, lines 56-59.) The adaptive policy engine repetitively receiving measured parameters from the back end servers and, accordingly, moving one of the back end servers from one cluster to another fails to describe the features of claim 29 of "determine a restructuring plan for the structure of the paths based on an exchange of data on a draft relocation plan of the node functions and data on a draft restructuring plan of the structure of the paths."

Accordingly, Nguyen, Vange, Wienert, Mangipudi, and Aoki, either alone or in combination, fail to teach or suggest all of the features of claim 29.

Claims 30-34

Claims 30-34 depend from claim 29. Thus, dependent claims 30-34 are allowable for at least the same reasons that independent claim 29 is allowable.

For at least the foregoing reasons, Nguyen, Vange, Wienert, Mangipudi, and Aoki, either alone or in combination, fail to teach or suggest all of the features of newly added claims 29-34. Accordingly, Applicant respectfully requests withdrawal of the 35 USC §103(a) rejections of cancelled claims 1-28.

The present pending claims of this application are allowable and Applicant respectfully requests the Examiner to issue a Notice of Allowance for this application. Should the Examiner deem a telephone conference to be beneficial in expediting allowance/examination of this application, the Examiner is invited to call the undersigned attorney at the telephone number listed below.

Respectfully submitted,

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